STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET

November 19, 2007

Denis Hulme
Woodin & Associates, LLC
111 Patriot Drive, Ste. D
Middletown, DE 19709

RE: PLUS review – PLUS 2007-10-12; Gateway

Dear Mr. Hulme:

Thank you for meeting with State agency planners on October 24, 2007 to discuss the proposed plans for the Gateway project to be located at the intersection of Route 299 and Brick Mill Road.

According to the information received, you are seeking a rezoning for a 270,000 sq. ft. shopping center and 504 residential units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the Town of Middletown is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office***

STATE PLANNING COORDINATION
122 WILLIAM PENN STREET • THIRD FLOOR • DOVER, DE 19901
PHONE: (302) 739-3090 • FAX: (302) 739-6958 • WWW.STATE.DE.US/PLANNING

notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.

State Strategies/Project Location

- This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed project.

Street Design and Transportation

- Delaware Route 299 is classified as a minor arterial road and Brick Mill Road is classified as a collector road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on collector and minor arterial roads. Therefore we will require right-of-way dedication along the frontage to provide any additional width needed from this project.

- DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage and provide a 10-foot wide shared use path within that easement.

- In 2006, DelDOT developed an East Middletown Master Transportation Plan that included the development of the subject land and recommended improvements to the area road network. Significant recommendations relevant to this development included the widening of Route 299 to four lanes from New Street to a point east of Brick Mill Road, the addition of a channelized right turn lane on westbound Route 299 at Brick Mill Road and the installation, when warranted, of a signal on Route 299 at Gloucester Boulevard (a planned street in the Willow Grove Mill development.

  More recently, DelDOT has begun discussions with the developers of this project and others in the Route 299 corridor about the development of an arrangement similar to that used in Westown, whereby the developers would build, and partially fund, the improvements identified in the Plan.

  On the basis of the Plan, DelDOT would recommend that the Town consider approval for this project after the development of a mechanism, acceptable to the Town, developers and DelDOT, for the completion of the improvements

identified above in a timely manner. If such a mechanism is not developed, they would recommend that a traffic impact study (TIS) be required.

The proposed right-in, right-out entrance on Route 299 may not be acceptable, and the proposed entrance on Brick Mill Road may be too close to Route 299 for us to permit all turning movements. DelDOT will reserve judgment in these matters pending the results of the TIS or operational analysis, whichever the Town requires.

- DelDOT has two comments on the proposed north-south collector street. First, it should be aligned, if it is not already, with the planned Gloucester Boulevard on the south side of Route 299.

  Second, as recommended in the East Middletown Master Transportation Plan the Lake Street Extension would end at Silver Lake Road. However, the appendix to that report describes a further extension that would in part follow Remington Drive and Dove Run Boulevard in the Estates of Dove Run but would continue east to the subject land and then, as a one-way westbound ramp, tie into the off-ramp from southbound Route 1. More work needs to be done to determine the merits of this further extension, but because it would require land from this project, enough work should be done now to determine a feasible alignment for it and to reserve or dedicate the needed rights-of-way for possible future use. The north part of proposed collector street appears to fit into such an alignment.

  DelDOT appreciates the proposed stub street to allow for the relocation of DelDOT's Park-and-Ride lot access into the development's street system. DelDOT anticipates that the developer would need to close the lot's existing access to provide an adequate deceleration lane for the development entrance.

Natural and Cultural Resources

- DNREC recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).

- To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure (such as stormwater management ponds) be pulled out of the forest and that areas of community open space be designated along the forested/riparian areas. Doing so will accomplish two things: it will preserve the buffers and will satisfy DNREC's request for 100

foot riparian/wetland buffers, and it will create recreational opportunities for residents by allowing them access to and views of the forest and stream.

- The applicant is strongly encouraged to preserve, and where possible, enhance forested resources on site. The forested areas on-site should be viewed as a community asset and managed appropriately.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Herb Inden 739-3090

This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed project.

Division of Historical and Cultural Affairs – Contact: Terrance Burns 739-5685

In reference to this particular parcel, the historic resources at State Historic Preservation Office of the Division of Historic & Cultural Affairs did show and indicate the following:

- There was a dwelling/building of some type, very close to this parcel/property (project area), or possibly on or within it, but it is no longer there. It was known as the Charles Derrickson "Indian Range" (N-5218), it is not a National Registry listed property, and it is located south of side Road 437 ½ to ¾ mile from intersection of Route 71 and 299. It is possibility that there could be a potential archaeological site (historic or prehistoric-period) on this parcel (property/project area) or nearby that was associated with the Charles Derrickson "Indian Range" (N-5218).

- The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out.

- This parcel is in a vicinity where it is a possibility that there could be a potential archaeological site on this parcel, or nearby it. Prior to any demolition or ground-disturbing activities, or before any type of construction proceeds the developer may want to hire an archaeological consultant to check or examine this parcel/property (project area) for the possibility of a cemetery here, or to see if there are any archaeological sites on it.

The State Historic Preservation Office of the Division of Historic & Cultural Affairs recommends and do hope that the developer will take these comments in to consideration. Also, if the developer would like to discuss this in further detail, contact Mr. Terence Burns, Information Resource Specialist, at the State Historic Preservation Office of the Division of Historic & Cultural Affairs at (302) 736-7400.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

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2) DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage and provide a 10-foot wide shared use path within that easement.

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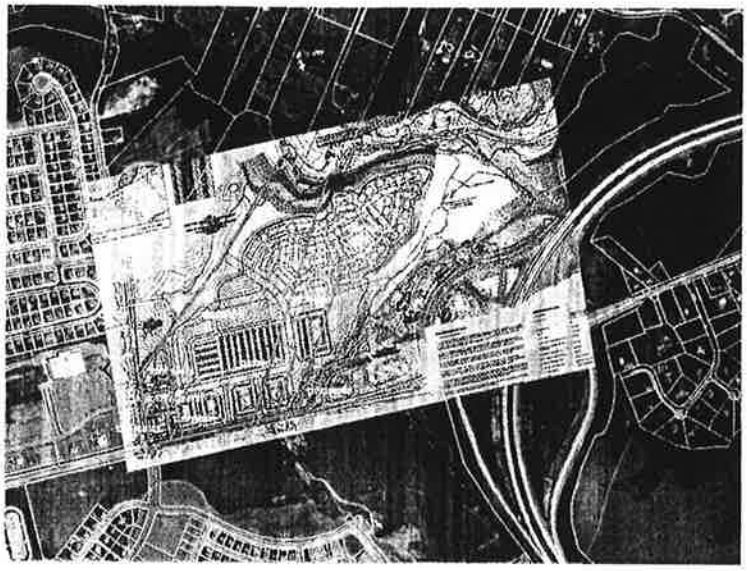
6) DelDOT appreciates the proposed stub street to allow for the relocation of DelDOT's Park-and-Ride lot access into the development's street system. DelDOT anticipates that the developer would need to close the lot's existing access to provide an adequate deceleration lane for the development entrance.

7) The developer's site engineer should contact the DelDOT Subdivision Manager for southern New Castle County, Mr. Pao Lin, regarding specific requirements for access and off-site improvements. Mr. Lin may be reached at (302) 760-2157.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

DNREC comments on Gateway (2007-10-12)

DNREC is concerned about the high percentage of post-construction impervious cover, estimated by the developer at 75%. A significant portion of the parcel falls within an excellent ground-water recharge area for the Town of Middletown (see attached map). The Town of Middletown has yet to develop source water protection ordinances. Their 2005 Comprehensive Land Use Plan expresses the intent to protect excellent-recharge areas by limiting impervious cover.



Excellent recharge areas are shown in green.

DNREC strongly believes that the applicant should significantly reduce the amount of post-construction surface imperviousness generated from this project. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings – are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

Ideally, the portion of the new development within the excellent ground-water recharge area should not exceed 20% impervious cover. Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless.

In addition, the project falls within the impaired Appoquinimink watershed and will be subject to the nutrient reduction requirements listed below. The parcel contains headwater riparian wetlands associated with the Appoquinimink. DNREC recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).

Water Recharge and Water Quality

As mentioned above, a significant portion of this project falls within an excellent ground-water recharge area. The Town of Middletown has yet to develop source water protection ordinances. Their 2005 Comprehensive Land Use Plan expresses the intent to protect excellent-recharge areas by limiting impervious cover.

To show that the region's future water supply is adequate and properly protected for quality and quantity the Town should make public all information regarding the excellent recharge areas, well head protection areas, source water protection and Water Resource Protection Areas. At a minimum this should include any analysis, findings, recommendations, land use actions, land preservation agreements and land conservation agreements.

New Castle County defines excellent ground-water recharge potential areas as 'recharge areas.' Recharged areas are characterized as deposits of the coarser grained material have the best ability to transmit water vertically through the unsaturated zone to the water table. The NCC recharge areas were mapped using the methods described in the Delaware Geological Survey Open File Report No. 34, "Methodology for Mapping Ground-Water Recharge Areas in Delaware's Coastal Plain" (August 1991), and depicted in a series of maps prepared by the Delaware Geological Survey (Butoryak and Tally, 1993).

DNREC's Water Supply Section recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover. Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless.

A water balance calculation (environmental assessment) will be necessary to determine the quantity of clean water to be recharged via a recharge basin (Thornthwaite, 1957). The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies.

A large percentage of this impervious cover is parking and roadways. This land use produces petroleum hydrocarbons, other organics, metals, and other inorganics (DNREC, 1999). These contaminants associated with this land use could easily infiltrate the unconfined aquifer and compromise water quality. The development as proposed exceeds DNREC recommendations.

DNREC recommends reducing the impervious cover to a value less than 50% dependent on the environmental assessment. The environmental assessment must document that post-development recharge will be no less than predevelopment recharge when computed on an annual basis. Commonly, the applicant offsets the loss of recharge due to impervious cover by constructing recharge basins that convey relatively pure rooftop runoff for infiltration to ground water (Kauffman, 2005).

In addition, because the excellent ground water recharge area can so quickly affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

References

Butoryak, Kathleen R. , and Talley, John H., 1993, Delineation of Ground-Water Recharge Resource Protection Areas in the Coastal Plain of New Castle County, Delaware: Delaware Geological Survey Project Report for the Water Resources Agency for New Castle County, p. 26.

Delaware Department of Natural Resources and Environmental Control (2005): *Source Water Protection Guidance Manual for the Local Governments of Delaware*: Dover, DE, 144 p. http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_final.pdf

Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, *Delaware Ground-Water Recharge Design Manual*: Newark, DE, Water Resources Agency, University of Delaware, p. 31. http://www.wr.udel.edu/swaphome/Publications/SWPguidancemanual.html

Thornthwaite, C. W., and Mather, J. R., 1957, Instructions and Tables for Computing Potential Evapotranspiration and the Water Balance, Volume x, Drexel Institute of Technology, Laboratory of Climatology.

Total Maximum Daily Loads (TMDL) Requirements.

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Appoquinimink watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Appoquinimink watershed, a post-development TMDL reduction level of 60 percent will be required for both nitrogen and phosphorus. Additionally, an 8% reduction in bacteria will also be required.

The Department developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional reductions may be possible through the implementation of Best Management Practices as, reducing surface imperviousness, increasing passive wooded open space, maximizing wetland buffers, and the use of green-technology stormwater management methodologies.

Contact Lyle Jones at 302-739-9939 for more information on the assessment tool. If you have any questions about the Appoquinimink Watershed strategy to reduce nutrients please contact Sara Wozniak at the Appoquinimink River Association, 302-382-0335.

Soils and Wetlands

Based on the New Castle County soil survey Matapeake, Sassafras, Mixed alluvial, and Tidal Marsh were mapped on subject parcel. The Sassafras soil mapping units are comprised of mostly steeply-sloping (>10% slope) soils. These soils have severe limitations for development and should be avoided. Mixed alluvial and tidal marshes are poorly-drained wetland associated (hydric) soils that have severe limitations for development and should be avoided.

Based on Statewide Wetlands Mapping Project (SWMP) mapping, tidally-influenced headwater palustrine riparian and riverine wetlands (associated with the Appoquinimink River) bound the entire northern boundary of subject parcel; while nontidal palustrine forested wetlands bisect the northeastern portion of the parcel.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE) manual is only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the USACE views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for a field-based jurisdictional wetland delineation (i.e., 1987 USACE manual).

To ensure compliance with said USACE regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the USACE be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant's consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the USACE must be contacted to evaluate and assess the jurisdictional validity of such a delineation. In other words, the final jurisdictional authority for making isolated wetlands determinations ultimately rests with the USACE, not a privately-paid wetlands consultant. The USACE can be reached by phone at 736-9763.

It should be noted that in addition to USACE jurisdictional wetland requirements, tidally-influenced wetlands are subject to additional and more stringent regulatory requirements provisions of the State of Delaware's Tidal Wetlands Regulations (Chapter 66). Since it almost certain that the wetlands bounding this parcel are tidal, the Wetlands Section of the Division of Water Resources must be contacted prior to commencing any construction activities.

The Wetlands Section can be reached at 739-9943.

As noted previously, this parcel contains headwater riparian wetlands associated with the Appoquinimink River. Headwater or near headwater riparian wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since such streams are a major avenue for nutrient-laden stormwater and sediment runoff, their protection deserves the highest priority. In recognition of this concern, the DNREC strongly recommends the applicant consider preserving the existing natural riparian buffer adjacent to the Appoquinimink River in its entirety.

Based on a review of existing buffer research by Castelle et al. (1994), an adequately sized buffer that effectively protects wetlands and streams - in most circumstances - is about 100 feet in width. In recognition of this research and the need to protect water quality, DNREC recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).

Drainage and Stormwater Management

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies.

This project is located in the Appoquinimink Watershed which has been degraded by nutrients and bacteria. A total maximum daily load (TMDL) has been established to reduce nutrients in the Appoquinimink River and its watershed.

The DNREC Sediment and Stormwater Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies - including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or removal of trees for the sole purpose of placement of a stormwater management facility/practice.

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Because the Sediment and Stormwater Program is in the process of revising its state regulations it is a good idea to contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through Town of Middletown. *(Contact Town of Middletown at 302-378-9120 for details regarding submittal requirements and fees.)*

Open Space and Forest

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure (such as stormwater management ponds) be pulled out of the forest and that areas of community open space be designated along the forested/riparian areas. Doing so will accomplish two things: it will preserve the buffers and will satisfy DNREC's request for 100 foot riparian/wetland buffers, and it will create recreational opportunities for residents by allowing them access to and views of the forest and stream.

The developer is strongly urged to consider alternatives to mowed grass within community open space areas, especially along wetland buffers/stormwater management facilities. Mowing and other maintenance costs from lawn areas can become a substantial burden for community maintenance associations. There may be areas within the development that are appropriate for warm or cool season grasses. The maintenance costs associated with meadow type grasses are much lower than those of lawn grasses, and provide food and habitat for birds and other wildlife and can help reduce non-point source pollution. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at:
http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

The applicant is strongly encouraged to preserve, and where possible, enhance forested resources on site. The forested areas on-site should be viewed as a community asset and managed appropriately.

The applicant indicated during the PLUS meeting that the answer to question #27 on the application "How many acres of forest will be removed?" is wrong. Ten acres of forest will not be removed; rather, very little will be removed.

There was also some discussion as to whether or not a future connection to town property (west side of site) would be constructed at this time. This connection would traverse the forested riparian buffer, cross through a State Natural Area, and potentially through bog turtle habitat. We encourage the applicant to consider the environmental impacts of such a connection and the sensitive nature of the forest at this site.

Cumulative forest loss throughout the state is of utmost concern to our Division which is responsible for conserving and managing the states wildlife (see www.fw.delaware.gov and the Delaware State Code, Title 7). Because of an overall lack of forest protection, we have to rely on applicants and/or the entity that approves the project (i.e. counties and municipalities) to consider implementing measures that will aide in forest loss reduction.

Forested areas on-site set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Wildlife Habitat

Bog Turtle. A review of the DNREC database has revealed that there may be suitable habitat for the federally listed bog turtle (Glyptemys muhlenbergii) associated with wetlands along Drawyers Creek and its tributaries. Historical occurrences of this species are recorded upstream less than 0.5 miles away. It is standard procedure to require Phase I surveys for bog turtle habitat if project activities are within 300ft of potential habitat, if changes to hydrology are expected and if in close proximity to a known occurrence. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys should be completed on any wetlands within 300ft of project boundaries. If surveys have already been completed, please forward a copy of the report to Holly Niederriter, Natural Heritage and Endangered Species Program.

Please note that a Delaware-approved bog turtle surveyor must be used to conduct the surveys. Phase I surveys can be conducted any time of year when snow cover is not

present. If potential habitat is found, however, please note there is a time of year restriction during which Phase II surveys for bog turtles must be conducted.

If potential bog turtle habitat is found during Phase I surveys, you are required to either:

1) Completely avoid all direct and indirect project impacts to the wetland, in consultation with the U.S. Fish and Wildlife Service and Delaware Division of Fish and Wildlife; or

2) Have Phase II surveys conducted to determine if bog turtles are present. In accordance with Delaware's bog turtle site survey procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15.

Additional Rare Species. DNREC has not surveyed the project area, therefore, it is unknown if state-rare or federally listed plants, animals or natural communities would be impacted by this project. A review of our database indicates that the following species occur adjacent to or within the vicinity of this project site. Since similar habitat exists within the project parcel, these species could occur there as well:

Caltha palustris (marsh marigold) is a state-rare plant that occurs in seepage wetlands associated with forested areas. To void impacts to this species the forested riparian buffer (at least 100 ft and preferably 300 ft) along Drawyers Creek, its tributaries, and associated wetlands need to be left intact. It appears from the site plan and from discussions with the developer, that the forested riparian buffers will be maintained.

Circus cyaneus (Northern Harrier) is a state-rare bird that depends on forested areas for breeding. This species should not be impacted as most of the trees at this site will be left intact.

(For more information on rare and endangered species contact Edna Stetzar of Fish and Wildlife, 302-653-2880 or Edna.Stetzar@state.de.us.)

Water Supply

The information provided indicates that the Town of Middletown/Artesian Water Company will provide well water to the proposed projects through a central public water system. DNREC files reflect that the Town of Middletown/Artesian Water Company does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already.

Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 ft. from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

(For questions concerning these comments, contact Rick Rios at 302-739-9944.)

Air Quality

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	38.7 tons	32.0 tons	23.6 tons	2.1 tons	3235.5 tons
Residential	15.6 tons	1.7 tons	1.4 tons	1.8 tons	63.2 tons
Electrical Power		6.2 tons	21.5 tons		3172.2 tons
TOTAL	54.3 tons	39.9 tons	46.5 tons	3.9 tons	6470.9 tons

Once complete, vehicle emissions associated with this project are estimated to be 38.7 tons (77,358.7 pounds) per year of VOC (volatile organic compounds), 32.0 tons (64,047.8 pounds) per year of NOx (nitrogen oxides), 23.6 tons (47,255.6 pounds) per year of SO2 (sulfur dioxide), 2.1 tons (4,206.6 pounds) per year of fine particulates and 3,235.5 tons (6,470,960.1 pounds) per year of CO2 (carbon dioxide)

Emissions from area sources (paints, lawn and garden equipment, wood combustion, etc.) associated with this project are estimated to be 15.6 tons (31,202.3 pounds) per year of VOC (volatile organic compounds), 1.7 tons (3,433.2 pounds) per year of NOx (nitrogen oxides), 1.4 tons (2,849.1 pounds) per year of SO2 (sulfur dioxide), 1.8 tons (3,676.6

pounds) per year of fine particulates and 63.2 tons (126,487.1 pounds) per year of CO2 (carbon dioxide)

Emissions from electrical power generation associated with this project are estimated to be 6.2 tons (12,366.3 pounds) per year of NOx (nitrogen oxides), 21.5 tons (43,013.4 pounds) per year of SO2 (sulfur dioxide) and 3,172.2 tons (6,344,473.0 pounds) per year of CO2 (carbon dioxide).

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 6.2 tons of nitrogen oxides per year and 21.5 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage: http://www.energystar.gov/:

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

- building envelope upgrades,
- high performance windows,
- controlled air infiltration,
- upgraded heating and air conditioning systems,
- tight duct systems and
- upgraded water-heating equipment."

The Energy office in DNREC is training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths and links to mass transport system, fund a lawnmower exchange program for their new occupants

For more information, contact Philip Wheeler - 302-739-9402, or Philip.Wheeler@state.de.us.

Miscellaneous

There is one inactive LUST site(s) located near the proposed project (DOT - Guseman Property, Facility # 3-001611, Project # N0108071). No environmental Impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible.

It is not anticipated that any construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

For more information, contact Ronald Brown, 302-395-2500 or Ronald.Brown@state.de.us

State Fire Marshal's Office – Contact: John Rudd 302-323-5365

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
   - Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
   - Where a water distribution system is proposed for (Storage/Industrial/Mercantile) sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
   - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.

- Buildings greater than 10,000 sq. ft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

c. **Accessibility**
- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access roads must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
- Provide type of fuel proposed, and show locations of bulk containers on plan.

e. **Required Notes**:
- Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered

- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed project. The project is within the Town of Middletown, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 areas.

A portion of the site is located within an area designated as having "excellent" ground-water recharge potential. DNREC has mapped all ground-water recharge-potential recharge areas for the state, and an "excellent" rating designates an area as having important groundwater recharge qualities.

Senate Bill 119, enacted by the 141st General Assembly in June of 2001, requires the counties and municipalities with over 2,000 people to adopt as part of the update and implementation of their 2007 comprehensive land use plans, areas delineating excellent ground-water recharge potential areas. Furthermore, the counties and municipalities are required to adopt regulations by December 31, 2007 governing land uses within those areas to preserve ground-water quality and quantity.

Maintaining pervious cover in excellent and good recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as "excellent" and "good" recharge areas adversely impacts the future prospects for agriculture in Delaware. The developer should make every effort to protect and maintain valuable ground-water recharge potential areas.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars

per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware State Housing Authority – Contact Vicki Walsh 739-4263

This proposal is for a site plan review on a mixed-use commercial and residential site plan consisting of 504 residential lots and 270,000 sq. ft of commercial space, located at the intersection of Route 299 and Brick Mill Road in Middletown. According to the *State Strategies Map,* the proposal is located in an Investment Level 2 area. As a general planning practice, DSHA encourages residential development inside growth zones, where residents will have proximity to services, markets, and employment opportunities. In addition, DSHA strongly supports the development of rental communities. They can be the most economical to construct and are needed to meet the needs of low- and moderate-income families. DSHA's most recent Statewide Housing Needs Assessment has identified a need for the construction of an additional 1,489 rental units over the 2008 to 2012 time period.

While it is unclear at this time what income level this rental community will be serving, it would be beneficial if some of the units were set aside for low- and moderate-income families.

Department of Education – Contact: John Marinucci 735-4055

This proposed development is within the Appoquinimink School District. DOE offers the following comments on behalf of the Appoquinimink School District.

1. Using the DOE standard formula, this development will generate an estimated 252 students.
2. DOE records indicate that the Appoquinimink School Districts' *elementary schools **are at or beyond** 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Appoquinimink School Districts' *secondary schools **are at or beyond** 100% of current capacity* based on September 30, 2006 secondary enrollment.
4. The Appoquinimink School District is the fastest growing district in the State of Delaware given the number of active, planned and recorded residential sub divisions within district boundaries.
5. This development will create significant additional elementary and secondary student population growth which will further compound the existing shortage of space experienced by the Appoquinimink School District.
6. This development will be subject to the Voluntary School Assessment laws and requirements for New Castle County School Districts. See Title 9, Chapter 26, § 2661, et al Delaware Code.
7. DOE requests developer work with the Appoquinimink School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the school district.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

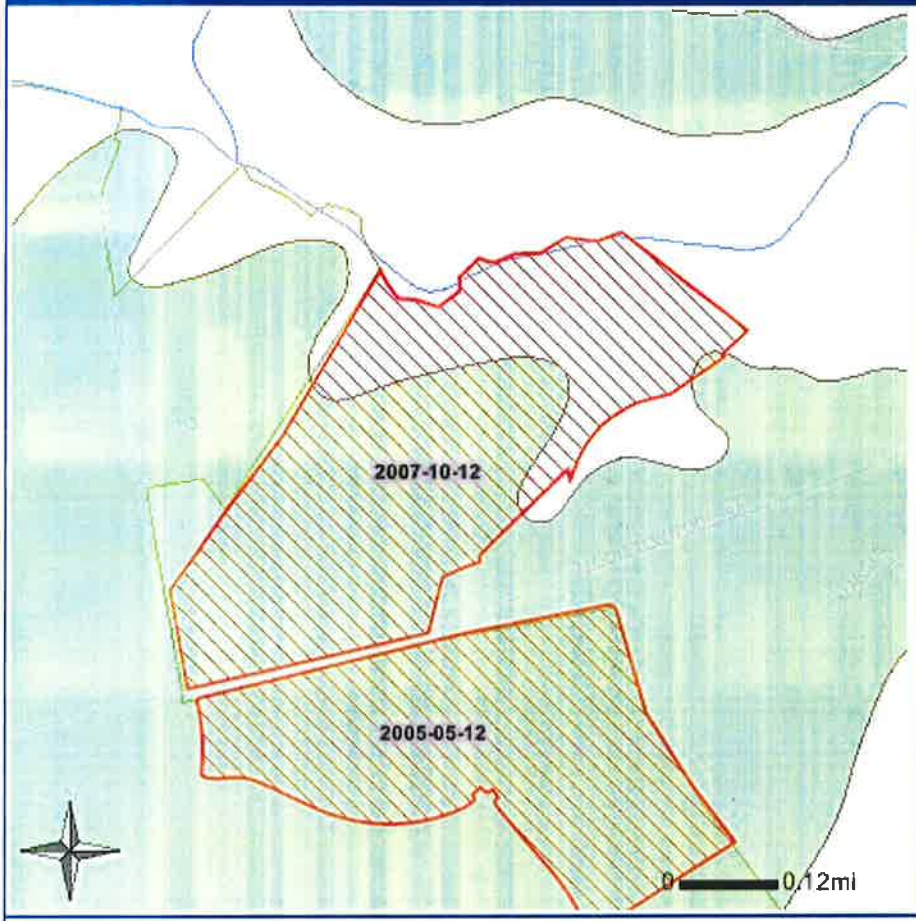
Constance C. Holland

Constance C. Holland, AICP
Director

CC: Town of Middletown

Gateway

2007-10-12



PLUS Projects

NHDFlowLine

All Roads

Excellent Recharge Areas

Towns

This map was produced by the Delaware Department of Natural Resources and Environmental Control.